

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re the application of:	)	Docket: NVIDP013/P000176
	)	
Donovan	)	Examiner: Wallace, Scott A.
	)	Group Art Unit: 2671
Serial No.: 09/535,045	)	
	)	
Filed: March 24, 2000	)	
	)	
For: SYSTEM, METHOD AND	)	
ARTICLE OF MANUFACTURE FOR	)	
CALCULATING A LEVEL OF DETAIL	)	
DURING COMPUTER GRAPHICS	)	
PROCESSING	)	

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**DECLARATION OF PRIOR INVENTION IN THE UNITED STATES  
OR IN A NAFTA OR WTO MEMBER COUNTRY  
TO OVERCOME CITED PATENT OR PUBLICATION (37 C.F.R. section 1.131)**

**PURPOSE OF DECLARATION**

1. This declaration is to establish completion of the invention in this application in the United States or in a NAFTA or WTO member country, at a date at least as early as 01/31/00.
2. The person making this declaration is an inventor, Walter E. Donovan.

**FACTS AND DOCUMENTARY EVIDENCE**

3. To establish the date of completion of the invention of this application, the following attached exhibit and statement are submitted as evidence:

**EXHIBIT A** – An excerpt from a draft document generated before the filing of the present patent application showing claims drafted at least as early as 01/31/00, and a screenshot of a "Date Modified" field associated with such draft document indicating a last date modified of 01/31/00.

**STATEMENT:** I, Walter E. Donovan, hereby state that the invention in the above patent application was conceived of and/or reduced to practice at least as early as 01/31/00, as evidenced by EXHIBIT A.

From this exhibit and statement, it is clear that the invention in this application was conceived of and/or reduced to practice at least as early as 01/31/00.

Declaration of Prior Invention in the United States or in a NAFTA or WTO Member Country to Overcome Cited Patent or Publication—  
37 C.F.R. section 1.131--page 1

#### DILIGENCE

4. It is hereby declared that applicants acted diligently up to reduction to practice or the filing of the above patent application.

#### TIME OF PRESENTATION OF THE DECLARATION

5. This declaration is submitted prior to final rejection, or with a first reply after a final rejection for the purpose of overcoming a new ground of rejection or requirement made in such final rejection, in which case the declaration is considered timely and should be considered. See MPEP 715.09 (C).

#### DECLARATION

6. As a person signing below:

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

#### SIGNATURE(S)

Inventor's signature:

Walter E. Donovan Date: 5/24/2004  
Walter E. Donovan

Country of Citizenship:

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Residence:

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37 C.F.R. section 1.131—page 2

TOTAL P.03



- 1 1. A method for calculating a level of detail (LOD) value for use during  
2 computer graphics processing, comprising:
  - 3 (a) receiving a plurality of geometrically arranged coordinates ( $z_0, z_1, z_2, z_3$ );
  - 4 (b) estimating a derivative value ( $z'$ ) using the equation:  $((z_2 - z_0) + (z_3 - z_1))/4$ ;  
5 and
  - 6 (c) calculating a LOD value using the estimated derivative value ( $z'$ ) for use  
7 during computer graphics processing.
- 1 2. The method as recited in claim 1, wherein the derivative value is a derivative  
2 with respect to an x-axis.
- 1 3. The method as recited in claim 1, wherein the derivative value is a derivative  
2 with respect to an y-axis.
- 1 4. The method as recited in claim 1, wherein the geometrically arranged  
2 coordinates ( $z_0, z_1, z_2, z_3$ ) are texture coordinates ( $u_0, u_1, u_2, u_3$ ).
- 1 5. The method as recited in claim 1, wherein the geometrically arranged  
2 coordinates ( $z_0, z_1, z_2, z_3$ ) are texture coordinates ( $v_0, v_1, v_2, v_3$ ).
- 1 6. The method as recited in claim 1, wherein the geometrically arranged  
2 coordinates ( $z_0, z_1, z_2, z_3$ ) are texture coordinates ( $p_0, p_1, p_2, p_3$ ).
- 1 7. The method as recited in claim 1, wherein the geometrically arranged  
2 coordinates ( $z_0, z_1, z_2, z_3$ ) are representative of a square with  $z_0$  being an  
3 upper left corner of the square,  $z_1$  being an upper right corner of the square,  
4  $z_2$  being a lower left corner of the square,  $z_3$  being a lower right corner of the  
5 square.
- 1 8. The method as recited in claim 7, wherein the square is a 2x2 pixel square.

- 1 9. The method as recited in claim 1, wherein the LOD value is calculated for  
2 dependent textures.
- 1 10. The method as recited in claim 1, wherein the LOD value is calculated for  
2 cube mapping.
- 1 11. The method as recited in claim 4, and further comprising determining if the  
2 geometrically arranged coordinates reside on separate sides of a cube map,  
3 and performing a coordinate space transform if the geometrically arranged  
4 coordinates reside on separate sides of the cube map.